

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-15 are presently active in this application, Claims 1 and 2 having been amended by way of the present Amendment.

In the outstanding Official Action, Claim 2 was rejected under 35 USC §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 8-15 were rejected under 35 USC §103(a) as being unpatentable over Nakatsuka et al (U.S. Pat 5,752,182) in view of Bayan et al (U.S. Pat. 6,399,415). Claims 3-7 were rejected under 35 USC §103(a) as being unpatentable over Nakatsuka et al in view of Bayan et al and further in view of Selna (U.S. Pat. 5,741,729).

In response to the rejection under 35 USC §112, second paragraph, Claims 1 and 2 have been amended to clarify the claimed subject matter, without the addition of new matter.¹ Accordingly, this ground for rejection is believed to have been overcome. If the Examiner disagrees, the Examiner is invited to telephone the undersigned, who will be happy to work with the Examiner in a joint effort to derive mutually satisfactory claim language.

Before discussing the outstanding grounds for rejection on the merits, it is believed that a brief review of Applicants' invention may be helpful. As stated in Claim 1, Applicants' invention is directed to a semiconductor device including a substrate; a semiconductor chip arranged on the substrate; a first electrode formed in the substrate and connected to the semiconductor chip; a concave portion provided on a side of the substrate, the concave portion extending from a back of the substrate and not reaching a top of the

¹ See Figures 1A and 1B; and Specification, page 6, lines 11 and 12.

substrate, and at least part of the first electrode being exposed to the concave portion; and a metal layer formed on said at least part of the first electrode. As clarified in the present amendment, the concave portion extends from the back of the substrate and does not reach the top of the substrate. Therefore, even though a resin printing method is adopted, resin can be prevented from entering the concave portion. The semiconductor device can thus be mass-produced.²

In contrast, Nakatsuka et al. discloses a hybrid IC which, as shown in FIG. 2, includes a concave portion which penetrates entirely through the substrate 122. However, the Nakatsuka et al. concave portion is not so formed that it extends from the back of the substrate 122 and does not reach the top of the substrate 122, as stated in amended Claim 1. In view of the present amendment of Claim 1, it is respectfully submitted that Claim 1 patentably defines over Nakatsuka et al..

The Bayan et al. patent does not disclose any concave portion that extends from the back of a substrate and does not reach the top of the substrate, and thus does not cure this deficiency in Nakatsuka et al.. Consequently, even if Nakatsuka et al. and Bayon et al. are combined with each other, the semiconductor device recited in amended Claim 1, having the advantages above noted, is in no way rendered obvious by the combined teachings of these references.

² Specification, page 7, lines 11 to 18.

Application No. 10/080,580
Reply to Office Action of May 8, 2003

Consequently, in view of the above comments, Claims 1-15 are believed to be in condition for formal allowance, and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SRIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Eckhard H. Kuesters
Attorney of Record
Registration No. 28,870



22850

Tel: (703) 413-3000
Fax: (703) 413 -2220

I:\ATTY\EHK\AMEND-RESPONSES\0039\219975-AMT.DOC